

## **DETAILED ACTION**

This action is in response to the amendment filed on 21 July 2010.

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Albert W. Watkins on 30 August 2010, September 24, 2010 and September 27, 2010.

The application has been amended as follows:

a. The title will be changed as follows:

A Programmerator Method For Monitoring A Graphical User Interface On A Second Computer Display From a First Computer

b. The claims will be amended as follows:

Claim 8. A method for using a first computer system to remotely monitor and interact with the operation of a second computer system through a

graphical user interface of said second computer system, comprising the steps of:

receiving a pixel bitmap image of said second computer system graphical user interface at said first computer system;

searching said pixel bitmap image of said second computer system graphical user interface for a first graphical element ~~which may be found at one an indeterminate location~~ contained within and comprising less than said pixel bitmap image through an automated execution of said first computer system commands;

responsive to said receiving step and results of said searching step, generating a user peripheral input device input action within said second computer system graphical user interface as interpreted by a ~~said second computer peripheral input device controller channel~~ by automatically creating and passing a signal through an ~~i/o a~~ communications channel from said first computer system to said second computer system graphical user interface ~~responsive to said receiving step and results of said searching step;~~

monitoring said pixel bitmap image of said second computer system graphical user interface automatically from said first computer system for an expected second graphical element contained

within and comprising less than said pixel bitmap image within a predetermined time interval; and  
signaling a failure at said first computer system if said predetermined time interval elapses without detecting said expected second graphical element.

Claim 9 will be canceled.

Claim 11. The method of claim 8 further comprising the steps of:  
generating a user input action within said second computer system responsive to said second graphical element;  
monitoring and searching said second computer system graphical user interface automatically from said first computer system for an expected third graphical element ~~which may be found at one~~ ~~an indeterminate location~~ contained within and comprising less than said pixel bitmap image within a predetermined time interval; and  
signaling a failure at said first computer system if said predetermined time interval elapses without detecting said expected third graphical element.

Claim 14. A method for enabling a local system to automatically remotely operate a remote computer system through a graphical user interface on said remote computer system by using local scripts that selectively respond to changes in graphical displays upon said graphical user interface of said remote computer system, comprising the steps of:

displaying a depiction of said remote system graphical user interface display on said local system;

capturing user input effected in said depiction of said remote system graphical user interface display;

implementing automatically through a local system command language set user input emulations that are representative of said captured user input when reproduced at said remote computer system graphical user interface through a peripheral input device *i/o* channel;

image processing said remote computer system graphical displays automatically using a local system script that searches for and detects a first entity ~~which may be found at an indeterminate~~ location contained within and comprising less than said graphical display upon said graphical user interface of said remote computer system;

controlling a flow of execution of said local system automatically through a scripting language having scripting commands in

combination with said command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step; and communicating said user input emulations between said local system and said remote computer system graphical user interface through a communication interface responsive to said flow controlling step.

Claim 16. A method for using a first computer system to remotely monitor and interact with the operation of a second computer system through a graphical user interface of said second computer system, comprising the steps of:

receiving a representation of said second computer system graphical user interface at said first computer system; searching said representation of said second computer system graphical user interface for a first graphical entity ~~which may be found at one of an indeterminate location~~ contained within and comprising less than said representation of said second computer system graphical user interface through an automated execution of said first computer system commands; and  
responsive to said receiving step and results of said searching step,  
generating a user peripheral input device input action within said

second computer system graphical user interface as interpreted by a second computer ~~peripheral input device controller channel~~ by automatically creating and passing a signal through ~~an i/o a~~ communications channel from said first computer system to said second computer system graphical user interface ~~responsive to said receiving step and results of said searching step;~~

Claim 19. The method of claim 37 further comprising the steps of:  
generating a user input action within said second computer system responsive to said second graphical entity;  
monitoring and searching said second computer system graphical user interface for an expected third graphical entity within a predetermined time interval; and signaling a failure at said first computer system if said predetermined time interval elapses without detecting said expected third graphical entity.

Claim 28. A method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second computing machine by using computing scripts that selectively respond to changes within graphical displays upon said graphical user interface of said second computing machine, comprising the steps of:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine;

capturing user input effected in said depiction of said second computing machine graphical user interface display;

image processing said second computing machine graphical displays using a first computing machine script that searches for and detects the presence of a first entity ~~which may be found at locations an indeterminate location~~ contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine;

controlling a flow of execution of said first computing machine through a scripting language having scripting commands in combination with said a command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step; and

implementing user input commands at said second computing machine graphical user interface emulating said captured user input by communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented

responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented responsive to a non-detection of said first entity during said image processing step.

Claim 37. The method of claim 16, further comprising the steps of:

monitoring and searching said second computer system graphical user interface automatically from said first computer system for an expected second graphical entity within a predetermined time interval; and  
signaling a failure at said first computer system if said predetermined time interval elapses without detecting said expected second graphical entity.

Claim 38. A method for using a first computer system to remotely monitor and interact with the operation of a second computer system through a graphical user interface of said second computer system, comprising the steps of:

receiving a pixel bitmap image of said second computer system graphical user interface at said first computer system;  
searching said pixel bitmap image of said second computer system graphical user interface for a first graphical element which may

~~be found at one of a plurality of potential and indeterminate locations contained within and comprising less than said pixel bitmap image through an automated execution of said first computer system commands;~~

responsive to said receiving step and a not-found result of said searching step, generating a first user peripheral input device input action within said second computer system graphical user interface by automatically creating and passing a signal through an-i/o a communications channel from said first computer system to said second computer system graphical user interface responsive to said receiving step and a not found result of said searching step;

and responsive to said receiving step and a found result of said searching step, generating a second user peripheral input device input action within said second computer system graphical user interface different from said first user peripheral input device input action by automatically creating and passing a signal through an-i/o a communications channel from said first computer system to said second computer system graphical user interface responsive to said receiving step and a found result of said searching step.

Claim 39. The method for using a first computer system to remotely monitor and interact with the operation of a second computer system through a graphical user interface of said second computer system of claim 38, further comprising the steps of:

monitoring and searching said pixel bitmap image of said second computer system graphical user interface automatically from said first computer system for an expected second graphical element contained within and comprising less than said pixel image within a predetermined time interval; and  
signaling a failure at said first computer system if said predetermined time interval elapses without detecting said expected second graphical element.

Claim 40. A method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second computing machine by using computing scripts that selectively respond to changes within graphical displays upon said graphical user interface of said second computing machine, comprising the steps of:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine;

image processing said second computing machine graphical displays using a first computing machine search command set that searches for and detects the presence of a first entity ~~which may be found at one of a plurality of potential and indeterminate locations~~ contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine;

controlling a flow of execution of said first computing machine through a scripting language having scripting commands in combination with a command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step; and

communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented at said second computing machine responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented at said second computing machine responsive to a non-detection of said first entity during said image processing

step.

Claim 41. The method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second computing machine of claim 40, wherein said first and second user input commands are implemented at said second computing machine graphical user interface by transmitting signals from said first computing machine to said second computing machine graphical user interface through a peripheral input device  $\neq$  channel.

42. A method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second computing machine by using computing scripts that selectively respond to changes within graphical displays upon said graphical user interface of said second computing machine, comprising the steps of:  
displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine;  
capturing user input effected in said depiction of said second computing machine graphical user interface display;  
developing at least one computing script incorporating user input into said first computing machine selected from ones of various

scripting functions and commands, said at least one computing script further incorporating said captured user input; image processing said second computing machine graphical displays using a first computing machine search command set that searches for and detects the presence of a first entity ~~which may be found at one of a plurality of potential and indeterminate locations~~ contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine; controlling a flow of execution of said first computing machine through said at least one computing script, said flow which varies responsive to a result of detection of said first entity during said image processing step; and implementing user input commands at said second computing machine graphical user interface emulating said captured user input by communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented at said second computing machine graphical user interface responsive to a detection of said first entity during said image processing step and a second user input command different from said first

user input command implemented at said second computing machine graphical user interface responsive to a non-detection of said first entity during said image processing step.

Claim 48. The method of claim 8, further comprising the step of converting said received pixel bitmap image of said second computer system graphical user interface into a variant different from said second computer system graphical user interface prior to said searching step.

#### **Disclosure of the Prior Art of Record**

Tuttle et al. US 5,157,782: Tuttle discloses creating a script of I/O commands on a first computer. Running the script such that the I/O commands are transmitted across an I/O channel to a second computer, wherein the I/O commands are input to a software application. The application on the second computer outputting a Graphical User Interface (GUI) on a display of the second computer. Capturing the digital images displayed on the display of the second computer and transmitting the digital images to the first computer and storing the digital images at the first computer. Re-executing the script on the first computer in the manner described above, and recapturing the images on the display of the second computer and transmitting the images to the first computer. Comparing the second set of screen images with the first set of images. Signaling an

error for each first digital image that does match a corresponding digital image of the second set of images.

Perholtz et al. US 5,732,212: Perholtz discloses capturing a screen image from the display of a second computer and transmitting the screen image to a first computer and displaying the captured screen image on the display of the first computer.

Reid et al. US 6,055,964: Reid discloses capturing a digital image, searching for predetermined graphical images contained within the digital image, creating a list of the predetermined graphical images detected within the digital image.

McIntyre et al. US US 2004/0201709 A1: McIntyre discloses a client computer scanning a digital photograph, recognizing an image in the photograph and creating an identifier from the recognized image, and transmitting the identifier to a server. A server uploading low resolution copies of images from the client and using the identifier to determine other users with whom uploaded images can be shared.

2. The following is an examiner's statement of reasons for allowance:

Independent claims 8, 14, 16, 28, 38, 40 and 42 are allowable over the prior art of record, specifically:

With respect to claim 8, the prior art of record fails to disclose the combination of the following method steps:

searching a bitmap image of a second computer system graphical user interface for a first graphical element contained within and comprising less than said bitmap image through an automated execution of said first computer system commands;

responsive to said receiving step and results of said searching step, generating a user peripheral input device input action within said second computer system graphical user interface as interpreted by said second computer by automatically creating and passing a signal through a communications channel from said first computer system to said second computer system graphical user interface;

monitoring said bitmap image of said second computer system graphical user interface automatically from said first computer system for an expected second graphical element contained within and comprising less than said bitmap image within a predetermined time interval; and

signaling a failure at said first computer system if said predetermined time interval elapses without detecting said expected second graphical element.

In summary, the allowable subject matter is as follows:

from a first computer system, searching a bitmap image of a second computer system for a graphical element contained within the bitmap image and automatically sending a peripheral input device input action through a communications channel to the second computer system.

With respect to claim 14, the prior art of record fails to disclose the combination of the following method steps:

displaying a depiction of said remote system graphical user interface display on said local system;  
capturing user input effected in said depiction of said remote system graphical user interface display;  
implementing automatically through a local system command language set user input emulations that are representative of said captured user input when reproduced at said remote computer system graphical user interface through a peripheral input device channel;  
image processing said remote computer system graphical displays automatically using a local system script that searches for and detects a first entity contained within and comprising less than said graphical display upon said graphical user interface of said remote computer system;

controlling a flow of execution of said local system automatically through a scripting language having scripting commands in combination with said command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step; and communicating said user input emulations between said local system and said remote computer system graphical user interface through a communication interface responsive to said flow controlling step.

In summary, the allowable subject matter is as follows:

Displaying a depiction of a remote system graphical user interface on a local system and capturing user input effected in the depiction of the remote graphical user interface and automatically implementing command language set user input emulations representative of the captured user input, reproduced at the remote computer system graphical user interface through a peripheral input device channel and automatically, image processing the depiction of the remote system graphical user interface using a local script that searches for and detects a first entity contained within and comprising less than said graphical display upon said graphical user interface of said remote computer system and communicating said user input emulations between said local system and said remote computer system graphical user interface through a communication interface responsive to said flow controlling step.

Claim 16. A method for using a first computer system to remotely monitor and interact with the operation of a second computer system through a graphical user interface of said second computer system, comprising the steps of:

receiving a representation of said second computer system graphical user interface at said first computer system; searching said representation of said second computer system graphical user interface for a first graphical entity contained within and comprising less than said representation of said second computer system graphical user interface through an automated execution of said first computer system commands; and responsive to said receiving step and results of said searching step, generating a user peripheral input device input action within said second computer system graphical user interface as interpreted by a second computer by automatically creating and passing a signal through a communications channel from said first computer system to said second computer system graphical user interface.

In summary, the allowable subject matter is as follows:

from a first computer system, searching a bitmap image of a second computer system for a graphical element contained within the bitmap image and automatically sending a peripheral input device input action through a communications channel to the second computer system.

Claim 28. A method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second computing machine by using computing scripts that selectively respond to changes within graphical displays upon said graphical user interface of said second computing machine, comprising the steps of:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine;

capturing user input effected in said depiction of said second computing machine graphical user interface display;

image processing said second computing machine graphical displays using a first computing machine script that searches for and detects the presence of a first entity contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine;

controlling a flow of execution of said first computing machine through a scripting language having scripting commands in combination with said a command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step; and

implementing user input commands at said second computing machine graphical user interface emulating said captured user input by communicating between said first computing machine and said second

computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented responsive to a non-detection of said first entity during said image processing step.

In summary, the allowable subject matter is as follows:

Displaying a depiction of a computing machine graphical user interface on a local computing machine and capturing user input effected in said depiction of said second computing machine graphical user interface display and image processing said second computing machine graphical displays using a first computing machine script that searches for and detects the presence of a first entity contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine and controlling a flow of execution of said first computing machine through a scripting language having scripting commands in combination with said a command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step and implementing user input commands at said second computing machine graphical user interface emulating said captured user input by communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step.

Claim 38. A method for using a first computer system to remotely monitor and interact with the operation of a second computer system through a graphical user interface of said second computer system, comprising the steps of:

receiving a bitmap image of said second computer system graphical user interface at said first computer system;

searching said bitmap image of said second computer system graphical user interface for a first graphical element contained within and comprising less than said bitmap image through an automated execution of said first computer system commands;

responsive to said receiving step and a not-found result of said searching step, generating a first user peripheral input device input action within said second computer system graphical user interface by automatically creating and passing a signal through a communications channel from said first computer system to said second computer system graphical user interface;

and responsive to said receiving step and a found result of said searching step, generating a second user peripheral input device input action within said second computer system graphical user interface different from said first user peripheral input device input action by automatically creating and passing a signal through ~~an i/e~~ a communications channel from said first computer system to said second computer system graphical user

interface.

In summary, the allowable subject matter is as follows:

receiving a bitmap image of a second computer system graphical user interface at a first computer system and searching a bitmap image of a second computer system for a graphical element contained within the bitmap image and automatically sending a peripheral input device input action through a communications channel to the second computer system and responsive to said receiving step and a not-found result of said searching step, generating a first user peripheral input device input action within said second computer system graphical user interface by automatically creating and passing a signal through a communications channel from said first computer system to said second computer system graphical user interface and responsive to said receiving step and a found result of said searching step, generating a second user peripheral input device input action within said second computer system graphical user interface different from said first user peripheral input device input action by automatically creating and passing a signal through an ~~the~~ a communications channel from said first computer system to said second computer system graphical user interface.

Claim 40. A method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second

computing machine by using computing scripts that selectively respond to changes within graphical displays upon said graphical user interface of said second computing machine, comprising the steps of:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine;

image processing said second computing machine graphical displays using a first computing machine search command set that searches for and detects the presence of a first entity contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine;

controlling a flow of execution of said first computing machine through a scripting language having scripting commands in combination with a command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step; and

communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented at said second computing machine responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented at said second computing machine responsive to a non-

detection of said first entity during said image processing step.

In summary, the allowable subject matter is as follows:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine and image processing said second computing machine graphical displays using a first computing machine search command set that searches for and detects the presence of a first entity contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine and capturing user input effected in said depiction of said second computing machine graphical user interface display and controlling a flow of execution of said first computing machine through a scripting language having scripting commands in combination with a command language set, said flow which varies responsive to a result of detection of said first entity during said image processing step and communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented at said second computing machine responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented at said second computing machine responsive to a non-detection of said first entity during said image processing step.

42. A method for enabling a first computing machine to remotely operate a second computing machine through a graphical user interface on said second computing machine by using computing scripts that selectively respond to changes within graphical displays upon said graphical user interface of said second computing machine, comprising the steps of:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine;

capturing user input effected in said depiction of said second computing machine graphical user interface display;

developing at least one computing script incorporating user input into said first computing machine selected from ones of various scripting functions and commands, said at least one computing script further incorporating said captured user input;

image processing said second computing machine graphical displays using a first computing machine search command set that searches for and detects the presence of a first entity contained within and comprising less than said graphical display upon said graphical user interface of said second computing machine;

controlling a flow of execution of said first computing machine through said at least one computing script, said flow which varies responsive to a result of detection of said first entity during said image processing step; and

implementing user input commands at said second computing machine graphical user interface emulating said captured user input by communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented at said second computing machine graphical user interface responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented at said second computing machine graphical user interface responsive to a non-detection of said first entity during said image processing step.

In summary, the allowable subject matter is as follows:

displaying a depiction of said second computing machine graphical user interface display on a graphical user interface of said first computing machine; capturing user input effected in said depiction of said second computing machine graphical user interface display and developing at least one computing script incorporating user input into said first computing machine selected from ones of various scripting functions and commands, said at least one computing script further incorporating said captured user input and image processing said second computing machine graphical displays using a first computing machine search command set that searches for and detects the presence of a first entity contained within and

comprising less than said graphical display upon said graphical user interface of said second computing machine and controlling a flow of execution of said first computing machine through said at least one computing script, said flow which varies responsive to a result of detection of said first entity during said image processing step and implementing user input commands at said second computing machine graphical user interface emulating said captured user input by communicating between said first computing machine and said second computing machine graphical user interface through a communication interface responsive to said flow controlling step, a first user input command implemented at said second computing machine graphical user interface responsive to a detection of said first entity during said image processing step and a second user input command different from said first user input command implemented at said second computing machine graphical user interface responsive to a non-detection of said first entity during said image processing step.

The respective dependent claims add further limitations to the allowable subject matter of the independent claims and are, therefore, allowable over the prior art of record. Specifically, the prior art of record fails to clearly teach or fairly suggest the combination of elements as recited in the claims.

### ***Conclusion***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN HEFFINGTON whose telephone number is (571)270-1696. The examiner can normally be reached on 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boris M. Pesin can be reached on 571-272-4070. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.